

In the claims:

1-21. (cancelled)

22. (original) A Radio Frequency (RF) power amplifier comprising:

a differential transconductance stage adapted to receive a differential input RF voltage signal and to produce a differential output RF current signal;

a differential cascode stage adapted to receive a differential input RF current signal and to produce a differential output RF voltage signal; and

a differential AC coupling element coupled between the differential transconductance stage and the differential cascode stage and operable to AC couple the differential output RF current signal of the differential transconductance stage as the differential input RF current signal of the differential cascode stage.

23. (original) The RF power amplifier of claim 22, wherein each portion of the differential transconductance stage comprises a linear transconductance element and a circuit element that together couple between a transconductance stage voltage supply and a ground.

24. (original) The RF power amplifier of claim 23, wherein of the differential transconductance stage:

each linear transconductance element comprises a transistor; and

each circuit element comprises an inductor.

25. (original) The RF power amplifier of claim 22, wherein each portion of the differential cascode stage comprises a series combination of a first inductor, source and drain

terminals of a transistor, and a second inductor biased between a cascode stage voltage supply and a ground.

26. (original) The RF power amplifier of claim 25, wherein of the differential cascode stage, gates of each transistor are adapted to receive a controllable cascode bias voltage.

27. (original) The RF power amplifier of claim 22, wherein the differential transconductance stage and the differential cascode stage are powered at differing voltage supply levels.

28. (original) The RF power amplifier of claim 22, wherein the differential transconductance stage and the differential cascode stage are powered at a common voltage supply level.

29. (original) The RF power amplifier of claim 22, wherein each portion of the differential AC coupling element comprises a capacitor.

30-33 (cancelled)

34. (new) A method for amplifying a differential Radio Frequency (RF) signal comprising:

receiving a differential input RF voltage signal;

producing a differential output RF current signal based upon the differential input RF voltage signal using a differential transconductance stage;

AC coupling the differential output RF current signal as a differential input RF current signal to a differential cascode stage; and

producing a differential output RF voltage signal based upon the differential input RF current signal using a differential cascode stage.

35. (new) The method of claim 35, further comprising controlling a plurality of cascode bias voltages applied to the differential cascode stage.

36. (new) The method of claim 35, further comprising powering the differential transconductance stage and the differential cascode stage at differing voltage supply levels.

37. (new) The method of claim 35, further comprising powering the differential transconductance stage and the differential cascode stage at a common voltage supply level.